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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
DEHOHAN, QUEENIE S				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

# Office Action Summary

**Application No.**

10/527,631

**Applicant(s)**

LECLERCQ ET AL.

**Examiner**

QUEENIE DEHGHAN

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-49 is/are pending in the application.
- 4a) Of the above claim(s) 43-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-42, 49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 25-26, 28, 30-34, 39, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Letemps et al. (5,562,750). Letemps discloses a method for producing bent glass sheets comprising making glass sheets run over at least one shaping bed, for bending them, along a path with a curved profile in a run direction of the glass sheets, the glass sheets having been brought beforehand to their softening temperature, progressively giving them a desired bent shape; wherein, between an initial bending phase in which the glass sheets begin to adopt their shape and a final phase of bending, continuous blowing of air is performed, at a point on the path along which the glass sheets run, onto at least one face of the running glass sheets, under conditions capable of asymmetrically influencing a final concavity of the bent glass sheets by comparison with a concavity that the final bending would have given without the blowing (col. 3 lines 15-28, col. 4 lines 30-50).
3. Regarding claims 26 and 28, the blowing of air onto a face of the glass sheet is performed across an entire transverse region of the glass sheet with respect to the axis along which the glass sheet run (col. 3 lines 40-42).

4. Regarding claim 30, the blowing of air is performed on each side of the glass sheets as the glass sheets run along and in at least one transverse region of the glass sheets with respect to an axis along which the glass sheets run (col. 3 lines 25-27, 40-42).
5. Regarding claims 31 and 32, the air blown is cold/hot enough with respect to a bending temperature for the blowing to have an influence on the final bending (col. 3 lines 55-57, col. 4 lines 32-33, col. 5 lines 28-41).
6. Regarding claims 33 and 34, air at temperature close to the bending temperature (but not at the bending temperature) is blown producing a concavity on either side of the glass and in a perpendicular plane depending on the desired shape for the glass sheet (col. 3 lines 55-57, col. 4 lines 39-41).
7. Regarding claim 39, the glass sheets run in a planar trajectory through a reheate furnace and then in a trajectory with a curved profile tangential to the planar trajectory over a shaping bed of shaping rods and the blowing is performed along the curved profile trajectory after the glass sheets have begun to take shape (fig. 1, col. 1 lines 20-21, col. 3 lines 16-17, col. 5 lines 10-33).
8. Regarding claim 41, Letemps teaches toughening the sheet glass downstream of the blowing and before the end of bending (col. 1 lines 20-23, col. 3 lines 15-27, col. 4 lines 15-20).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 27, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750) in view of Boaz (5,380,348). Letemps teaches blowing air on a transverse region and on both side of the glass sheet, as mentioned above, but does teach blowing air on only one side of the sheet with respect to the axis along which the glass runs. Boaz teaches blowing air cold enough with respect to a bending temperature to have an influence on the final bending and on just one side of a glass sheet with respect to the axis along which the glass sheet runs (col. 2 lines 51-63, col. 4 lines 39-45, figure 2). Boaz basically teaches that it would have been obvious to one of ordinary skill in the art at the time of the invention to blow cold air on selected region of a hot glass sheet, such as on just one side of the glass sheet with respect to the axis along which the sheet runs, in order to achieve the desired temperature profile on the glass sheet and hence influence the final bending of the glass sheet. Accordingly, it

would have been obvious to one of ordinary skill in the art at the time of the invention to have employ the teachings of Boaz of utilizing cold air in the process of Letemps as it an effective means for controlling the final bending of the glass sheet as demonstrated by Boaz and of applying the cold air to just one side of the glass sheet of Letemps to obtain the temperature profile along a selected region of the glass sheet for producing the desired bending of the glass sheet.

12. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750) in view of Artani et al. (4,735,646). Letemps fails to disclose a specific pressure of the air blown on the glass sheet while quenching the sheet in a shaping bed to provide a desired curved profile. Artani teaches blowing air on a glass sheet to quench the hot glass sheet by directing air onto the glass sheet at a pressure of 0.05kg/cm<sup>2</sup> (col. 2 lines 35-58, col. 6 lines 23-36). Such an air pressure ensures a high cooling capability of the glass sheets (col. 5 lines 3-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employ the air pressure taught by Artani for the air blown the glass sheets on the shaping bed because such pressure ensures the cooling effect desired for handling bent glass sheets produced for automobile used.

13. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750). Letemps does not specifically mention the final dimensions of the bent glass sheet. Letemps does teach using shaping beds with various shapes, such as a slight transverse curvature (col. 6 lines 26-33). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed shaping beds/air

cushions that would provide the desired final dimensions on the glass sheet, i.e. a variation in a dimension ranging from 2/10mm to 2mm, as it is a matter of design choice for producing the final glass sheets suitable for its purpose, a specific windshield to fit a specific car.

14. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750) in view of Yoshizawa (6,698,243). Letemps fails to disclose specific dimensions of concavity with the final glass product. Yoshizawa teaches the bending of glass sheet with a radius of curvature of 1,300 mm (1.3 m) in the length and a radius of curvature of 50,000 mm (50 m) in the width. It would have been obvious to one of ordinary skill in the art at the time of the invention to have selectively applied any desired radius of curvature, such as a radius of curvature of a line parallel to the run direction ranging from 1 meter to infinity and a radius of curvature of a line perpendicular to the run direction ranging from 5 meters to infinity, to the glass sheet by controlling of the blowing air on the sheet.

15. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750) in view of Honjo et al. (JP Abstract 2000-281367). Letemps fails to teach an initial bending step. Honjo teaches a method for bending sheet glass comprising an initial and subsequent bending step comprising shaping rods with a curved profile, wherein the initial bending is performed by sag bending (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized sag bending to preshaped the glass sheet in the process of Letemps since

Honjo teaches that is well known in the art to sag bending glass sheets while still accomplishing the same results of a curved profile on the glass sheet.

16. Claims 38 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750) in view of Aratani et al. (4,735,646). Letemps fails to disclose a toughening air pressure or temperature of the glass sheet as it is moved along to the toughening step. Aratani teaches moving glass sheets at a temperature of 600-700°C to a toughening step, wherein air is blown onto the glass sheets by directing air at a pressure of 0.3kg/cm<sup>3</sup> ( $2.94 \times 10^4$  Pa) onto the face of the glass sheet. It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the air pressure of Aratani in the toughening process step in order to provide the sufficient tempering for the glass sheet for automobile use.

17. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Letemps et al. (5,562,750) in view of Boaz (5,380,348). Letemps discloses a method for producing bent glass sheets comprising making glass sheets run over at least one shaping bed, for bending them, along a path with a curved profile in a run direction of the glass sheets, the glass sheets having been brought beforehand to their softening temperature, progressively giving them a desired bent shape; wherein, between an initial bending phase in which the glass sheets begin to adopt their shape and a final phase of bending, continuous blowing of air is performed, at a point on the path along which the glass sheets run, onto at least one face of the running glass sheets, under conditions capable of asymmetrically influencing a final concavity of the bent glass sheets by comparison with a concavity that the final bending would have given without



the blowing (col. 3 lines 15-28, col. 4 lines 30-50). However, Letemps does teach blowing air on only one side of the sheet with respect to the axis along which the glass runs. Boaz teaches blowing air cold enough with respect to a bending temperature to have an influence on the final bending and on just one side of a glass sheet with respect to the axis along which the glass sheet runs (col. 2 lines 51-63, col. 4 lines 39-45, figure 2). Boaz basically teaches that it would have been obvious to one of ordinary skill in the art to blow cold air on selected region of a hot glass sheet, such as on just one side of the glass sheet with respect to the axis along which the sheet runs, in order to achieve the desired temperature profile on the glass sheet and hence influence the final bending of the glass sheet. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employ the teachings of Boaz of utilizing cold air in the process of Letemps as it an effective means for controlling the final bending of the glass sheet as demonstrated by Boaz and of applying the cold air to just one side of the glass sheet of Letemps to obtain the temperature profile along a selected region of the glass sheet for producing the desired bending of the glass sheet.

### ***Double Patenting***

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

19. Claim 25 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 29 and 42 of copending Application No. 10/578,779. Although the conflicting claims are not identical, they are not patentably distinct from each other because both recite the method steps of bringing a glass sheet to a softening temperature, running the sheet on a curved profile shaping bed to bend the sheet, and blowing air continuously on at least one face of the glass sheet under conditions to asymmetrically influencing a final concavity of the bent glass sheet.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

1. Applicant's arguments filed June 22, 2009 have been fully considered but they are not persuasive. Regarding the following limitation in claim 25:

*continuous blowing of air is performed, at a point on the path along which the glass sheets run, onto at least one face of the running glass sheets, under conditions capable of asymmetrically influencing a final concavity of the bent glass sheets by comparison with a concavity that the final bending would have given without the blowing*

the applicant argues Letemps does not asymmetrically influence the final concavity of the bent glass sheets and that Letemps teaches depositing air in a toughening zone. The bending path of Letemps comprises rods 1 to rod 9, along which air is continuously blown, although it switches from hot air to cooler air. Furthermore, Letemps teaches the air cushions can have a transverse curvature, shaping bed with bulging rollers or a cone of revolution, glass sheets with oblique edges, and panes with sharply curved corners (col. 3 lines 18-20, col. 5 lines 56-57, col. 6 lines 10-12, 30-33). These are indicating factors that the process of Letemps is "capable" of asymmetrically influencing the final concavity of the bent glass sheets.

2. Regarding claim 31, the applicant further argues Letemps does not teach air that is cold enough to influence the bending of the glass. Letemps teaches a bending process wherein hot air is provided followed by cooler air as it progress into the toughening zone. The cold air of the toughening zone is cold enough with respect to a bending temperature to have an influence on the final bending in that its influence is to prevent further bending. Furthermore, the limitation "cold enough with respect to a bending temperature" is relative. That is, cold enough could be interpreted to mean slightly colder than bending temperature, but not too cold so that bending could not occur.

3. Regarding claim 27 and the reference of Sugawara, the arguments were persuasive and have been withdrawn.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUEENIE DEGHAN whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEVEN P. GRIFFIN/  
Supervisory Patent Examiner, Art  
Unit 1791

Q Dehghan